

## CLAIMS

What is claimed is:

1. A system for printing, said system comprising:  
5 an optical sensor that is moveable relative to a print medium; and  
a mark visible to said optical sensor within the range of movement of  
said optical sensor, said mark providing a fixed and known location that can  
be used to establish a position of said optical sensor.
- 10 2. The system of Claim 1 further comprising a feed mechanism for  
transporting said print medium, said feed mechanism comprising a roller,  
wherein said mark is located on said roller.
3. The system of Claim 2 wherein said mark on said roller is  
15 visible to said optical sensor during transport of said print medium.
4. The system of Claim 2 wherein said mark is located at the ends  
of said roller.
- 20 5. The system of Claim 2 wherein said mark is one of a plurality of  
marks located at fixed and known positions along the length of said roller,  
wherein said optical sensor is positioned to sense said marks on said roller.
6. The system of Claim 5 further comprising a second optical  
25 sensor positioned to sense information from said print medium.
7. The system of Claim 1 wherein said feed mechanism  
comprises a second roller, wherein said mark is located on one of said  
rollers.
- 30 8. The system of Claim 1 wherein said optical sensor is adapted  
to sense information from said print medium, said information used to  
determine a position of said optical sensor.

9. The system of Claim 8 wherein said position determined according to said information sensed from said print medium is corrected using said position established according to said mark.

5 10. The system of Claim 8 wherein said position determined according to said information sensed from said print medium is used for determining a rotational mounting error associated with said optical sensor.

11. The system of Claim 1 further comprising:  
10 a printhead coupled to said optical sensor, said printhead adapted to eject ink onto said print medium, wherein said position of said optical sensor is used to establish a position of said printhead.

12. A method of correcting a position of a printhead in a system for  
15 printing, said method comprising:  
establishing an initial position of said printhead;  
estimating a second position of said printhead based on information sensed as said printhead moves relative to a print medium; and  
using a first marker in a known location to determine an error  
20 associated with said second position.

13. The method of Claim 12 further comprising:  
estimating a third position of said printhead based on information sensed as said printhead moves relative to said print medium; and  
25 using said error associated with said second position to correct said third position.

14. The method of Claim 12 wherein said initial position is established using said first marker.

30 15. The method of Claim 12 wherein said initial position determined using an edge of said print medium.

16. The method of Claim 12 wherein said initial position is  
35 established using a second marker.

17. The method of Claim 12 wherein said printhead moves in combination with an optical sensor, said optical sensor adapted to detect said first marker.

5 18. The method of Claim 12 wherein said system for printing further comprises a feed mechanism for transporting said print medium, said feed mechanism comprising a roller, wherein said first marker is located on said roller.

10 19. The method of Claim 12 wherein said system for printing further comprises a feed mechanism for transporting said print medium, said feed mechanism comprising a first roller and a second roller, wherein said first marker is located on one of said rollers.

15 20. A method of detecting rotational mounting error between an optical sensor and a printhead in a system for printing, said method comprising:

receiving a signal that identifies a direction of relative motion between said optical sensor and printhead moving in combination and a print  
20 medium;

estimating a position of said optical sensor and printhead using information sensed from said print medium; and

identifying any difference between a position of said optical sensor and printhead based on said direction of relative motion and said position of  
25 said optical sensor and printhead estimated using said information sensed from said print medium, said any difference indicating presence of a rotational mounting error.

30 21. The method of Claim 20 wherein said print medium moves in a first direction along a first axis and said optical sensor and printhead move in a second direction along a second axis orthogonal to said first axis, wherein said signal is for identifying whether said direction of relative motion is in said first direction or in said second direction.

22. The method of Claim 20 further comprising:  
correcting for said rotational mounting error if said any difference is  
identified.

5 23. The method of Claim 20 further comprising:  
using a feature having a known location to establish an initial position  
of said optical sensor and printhead.

10 24. The method of Claim 20 further comprising:  
using a feature having a known location to determine an error  
associated with said position of said optical sensor and printhead estimated  
using said information sensed from said print medium.